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Trichinosis From Dried Polar Bear Meat

Three members of a Gambell family developed trichinosis after eating dried polar bear meat. Two sisters were seen at Norton Sound Regional Hospital on June 29, complaining of a pruritic body rash, fever, headache, and swollen face. One also reported nausea and chills. Both were treated for a rash of unknown etiology with Benadryl. On July 24, during a village visit, an alert physician saw one of the sisters who still complained of rash, fever, and fatigue. Physical exam revealed swollen face and hands, weak lower extremities, and diarrhea. The mother also related a history of rash, swollen face, and diarrhea. Trichinosis was suspected, and blood was drawn for bentonite flocculation tests.

The three ill family members were seen in Nome on August 10; eosinophil counts were elevated at 54%, 34%, and 13%. All three were treated with Vermox 100 mg BID for five days. Subsequently, one of the family members became worse and was hospitalized. At time of admission, she had lost 50 pounds and reported bloody diarrhea, numb legs, myalgias, pleuritic chest pain, loose cough, nausea, and vomiting. Work-up showed bilateral pleural effusion, hepatomegaly, and cardiomegaly. She was started on steroids and diet therapy, and recovered without further complications.

Laboratory tests from the Centers for Disease Control, Atlanta showed elevated bentonite flocculation titers of 1:20 on two of the individuals and 1:320 on the third (normal 1:5). Dried polar bear meat which had been intended for dogs was mistakenly eaten by the three family members. The meat was positive for trichina larvae (4 larvae/gram) at the Department of Environmental Conservation lab.

The diagnosis of trichinosis is difficult; at least 50 diseases have been confused with it. Autopsy studies indicate that the vast majority of human infections with *T. spiralis* are subclinical. The severity of disease may be directly related to the ingested dose of viable larvae. In most cases, the illness starts with malaise, headache, fatigue, pains in the trunk and limbs, and a moderate fever. A generalized, maculopapular rash is seen in up to 80% of patients. Some patients report severe urticaria which may be recurrent. Edema of the face and extremities may appear 7 to 10 days after the onset. In severe cases, edema may be generalized.

Approximately half of the patients have diarrhea; it is often recurrent. In some cases, stools may be bloody. Some patients show dyspnea due to mild cardiac insufficiency, which is often complicated by pneumonia. Insomnia is a frequent complaint. Signs of meningeal irritation or focal neurological signs may also occur. Fatalities are most often associated with CNS involvement or myocarditis. Patients may have a long convalescent period accompanied by fatigue, myalgia, edema of the feet and ankles, and anemia.

Laboratory studies are essential to confirm the diagnosis. Studies usually show elevated eosinophil counts, and bentonite flocculation tests are usually positive within two to three weeks following infection. Antibody response peaks in four to eight weeks and may persist for several years. The drug of choice is thiabendazole. However, once the organism has encysted, thiabendazole should not be used. Prednisone is clearly indicated only for CNS or myocardial involvement. Use of prednisone for milder symptoms is not recommended due to the possibility of rebound and absence of clear evidence of clinical benefit.

Patients presenting with a generalized rash, and a complaint of diarrhea, headache, myalgia, or malaise and with a history of eating meat from arctic mammals should be carefully evaluated. An elevated eosinophil count combined with these symptoms should trigger the diagnosis. Serum should be drawn for a bentonite flocculation test which is available, free of charge, through the state laboratory. All suspected or diagnosed cases of trichinosis should be reported immediately to the Section of Epidemiology so that a thorough investigation can be done.